

PATENT CLAIMS

1. Method of speech recognition in order to identify a speech command as a match to a written text command, and comprising steps of:

- providing a text input from a text database;
- 5 • receiving an acoustic input;
- generating sequences of multilingual phoneme symbols based on said text input by means of a multilingual text-to phoneme module;
- generating pronunciations in response to said sequences of multilingual phoneme symbols; and
- 10 • comparing said pronunciations with the acoustic input in order to find a match.

2. Method according to claim 1 wherein the text input is processed letter by letter, and wherein a neural network provides an estimate of the posterior
15 probabilities of the different phonemes for each letter.

3. Method according to claim 1 comprising deriving said text input from a database containing user entered text strings.

- 20 4. System for speech recognition and comprising:
- a text database for providing a text input;
 - transducer means for receiving an acoustic input;
 - a multilingual text-to phoneme module for outputting sequences of multilingual phoneme symbols based on said text input;
 - 25 • pronunciation lexicon module receiving said sequences of multilingual phoneme symbols from said multilingual text-to phoneme module, and for generating pronunciations in response thereto; and
 - a multilingual recognizer based on multilingual acoustic phoneme models for comparing said pronunciations generated by the
30 pronunciation lexicon module with the acoustic input in order to find a match.

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5. System according to claim 4, wherein the multilingual text-to phoneme module processes said text input letter by letter, and comprises a neural network for giving an estimate of the posterior probabilities of the different phonemes for each letter.

6. System according to claim 5 wherein the neural network is a standard fully connected feed-forward multi-layer perceptron neural network.

7. System according to claim 4 wherein the text input is derived from a database containing user entered text strings.

8. System according to claim 7 wherein the database containing user entered text strings is an electronic phonebook including phone numbers and associated name labels.

9. Communication terminal having for speech recognition unit comprising:

- a text database for providing a text input;
- transducer means for receiving an acoustic input;
- a multilingual text-to phoneme module for outputting sequences of multilingual phoneme symbols based on said text input;
- pronunciation lexicon module receiving said sequences of multilingual phoneme symbols from said multilingual text-to phoneme module, and for generating pronunciations in response thereto; and
- a multilingual recognizer based on multilingual acoustic phoneme models for comparing said pronunciations generated by the pronunciation lexicon module with the acoustic input in order to find a match.

10. Communication terminal according to claim 9, wherein the multilingual text-to phoneme module processes said text input letter by letter, and

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comprises a neural network for giving an estimate of the posterior probabilities of the different phonemes for each letter.

11. Communication terminal according to claim 10 wherein the neural network
5 is a standard fully connected feed-forward multi-layer perceptron neural network.

12. Communication terminal according to claim 9 wherein the text input is derived from a database containing user entered text strings.

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13. Communication terminal according to claim 12 wherein the database containing user entered text strings is an electronic phonebook including phone numbers and associated name labels.

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